Building Bio Facilities & Bio Ecosystems: Federal, State & Private Resources

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AURP

Building Communities of Innovation™

Creating Communities of Innovation

ASSOCIATION OF UNIVERSITY RESEARCH PARKS

AURP is an international nonprofit NGO based in U.S with offices in Washington D.C. area and Arizona

- Represents research parks, innovation district and communities of innovation in the U.S., Canada, and around the world.
- 40 states in the US represented, six provinces in Canada and 13 countries around the globe.
- Sponsored by universities, federal labs, corporations and localities, these place-based communities represent leading scientific and technology clusters
- Over one million jobs and thousands of technology companies are represented by AURP members

Creating Communities of Innovation

ASSOCIATION OF UNIVERSITY RESEARCH PARKS

The World's First Research Park: Stanford University: 1951

AURP Members

* AURP Sustaining Members - as of November 2021.

2021 Participating Research Institutions & Organizations

16 Tech

Aggie Square – University of California, Davis

Alabama Power Company

American Chemical Society

Arizona Bioindustry Association

Arizona State University

Arkansas Research and Technology Park

Arrowhead Center, Inc. @ New Mexico State University

AstraZeneca

Atlanta BeltLine, Inc.

Auburn Research Park

BioHealth Innovation

Bio Nebraska

Biotechnology Innovation Organization

BioUtah

bwtech@UMBC Research and Technology Park

Carnegie Mellon University

City of Idaho Falls

Clemson University

Cleantech Commons at Trent University

Coldstream Research Campus

Colorado State University Research Foundation

Cummings Research Park

David Johnston Research + Technology Park - University of Waterloo

Delaware BioScience Association

Dhahran Techno Valley Holding Company

EDCUtah

Fitzsimons Innovation Community

Fort Hays State University

Fraunhofer USA, Inc.

George Mason University

Georgia Institute of Technology

HudsonAlpha Institute for Biotechnology

Illinois Institute of Technology

Incubate

Innovation Place

International Space Station US National Laboratory

Iowa State University Research Park

Kansas State University Foundation

KAUST Research & Technology Park

Knowledge Park

Lakehead University

Lehigh University

M Natural Resource Partners

MaRS Discovery District

Maryland Department of Commerce

Maryland Technology Council

McMaster Innovation Park

Michigan Bioscience Industry Association

Michigan State University Foundation

The National Academies of Sciences, Engineering & Medicine

National Diabetes & Obesity Research Institute at Tradition Medical City

North Carolina State University

Nebraska Innovation Campus

NIST-MEP

NUAIR

Oklahoma City Innovation District

Oklahoma State University Research Foundation

Pinkney Innovation Complex for Science & Technology at Montgomery College

Purdue Research Park

Prince William County Economic Development

Research Park at South Dakota State University

Research Triangle Park of NC

Rowan University

San Diego State University

Sandia National Laboratories

Southern Research Institute

STAR Park, Texas State University

Tech Parks Arizona, University of Arizona

Texas A&M University – Central Texas

Texas Tech University

The Beach at University of New Orleans

The University of Alabama in Huntsville

U.S, Economic Development Administration

UCI Beall Applied Innovation

UIDP

United Launch Alliance

University City Science Center

University Enterprise Laboratories

University of Arizona

University of California, San Diego

University of California, Riverside

University of Cincinnati

University of Delaware

University of Illinois Research Park

University of Maryland

University of Maryland BioPark

University of Maryland UAS Test Site

University of Minnesota

University of Oklahoma

University of San Francisco

University of South Alabama

University of South Florida Research Park

University of Utah

University of Utah Research Park

University Research Park – University of Wisconsin, Madison

Utah State University Innovation Campus

Utah-MEP

UTSA Tri-Centennial Innovation Park

Virginia Biotechnology Association

Virginia Tech Corporate Research Center

WE-Spark Health Institute

West Virginia Regional Technology Park Corporation

Creating Communities of Innovation™

ASSOCIATION OF UNIVERSITY RESEARCH PARKS

Harvard Enterprise Research Campus

Montgomery College, Maryland


Cleveland Clinic
Cleveland Innovation District
CASE WESTERN RESERVE UNIVERSITY EST. 1826
University Hospit
MetroHealth
90
490
422
77
315
North High Street
THE OHIO STATE UNIVERSITY
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When your child needs a hospital, everything matters.™
King Ave.
Cincinnati Children's
Martin Luther King Dr
Clifton Ave.
CINCINNATI INNOVATION DISTRICT™
UNIVERSITY OF Cincinn

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AURP BIO Health Caucus: June 12-13, 2022

US Grant Hotel | San Diego, CA

BIO IS BOOMING AROUND THE GLOBE

Designing, Building & Finding Research Space for Growing Bio Companies & Clusters

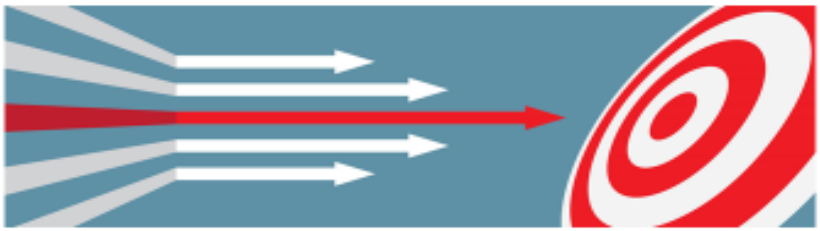
Journal of Commercial Biotechnology

Creating Communities of Life Science Innovation in the US: History of Critical Factors That Helped the BioHealth Capital Region Emerge

Issue | JCB, Volume 26, Number 1, 2021

Brian Darmody
Richard Bendis

- 1930: Creation of NIH through the Ransdell Act
- 1951: World's First Research Park at Stanford University
- 1958: Congress passes SBIC legislation leading to growth of VC funding
- 1980: Bayh-Dole Act and Cohen-Boyer Patent
- 1993: BIO Organization formed; state affiliates follow



Themes for new R and D Funding:

Applied Research

Collaboration

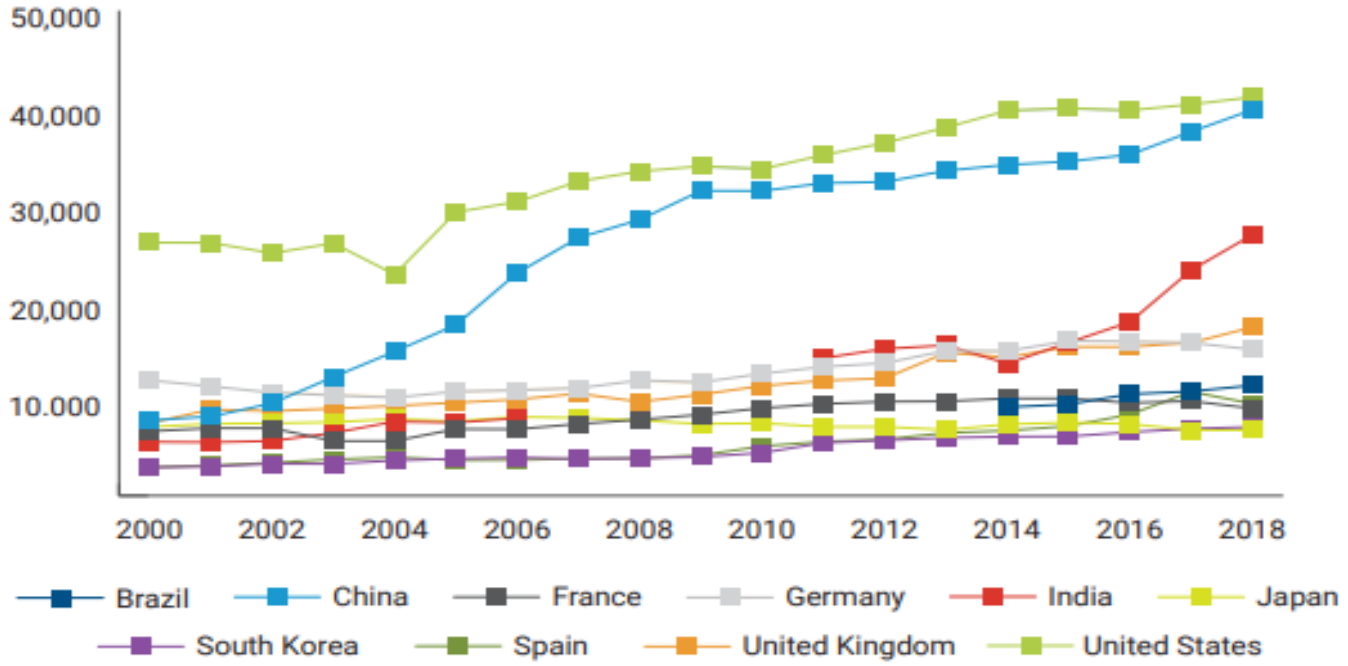
Regional

Geographic Diversity

Institutional Diversity

The U.S. awards more doctorates in STEM fields than other developed nations, topping 40,000 degrees in 2018.

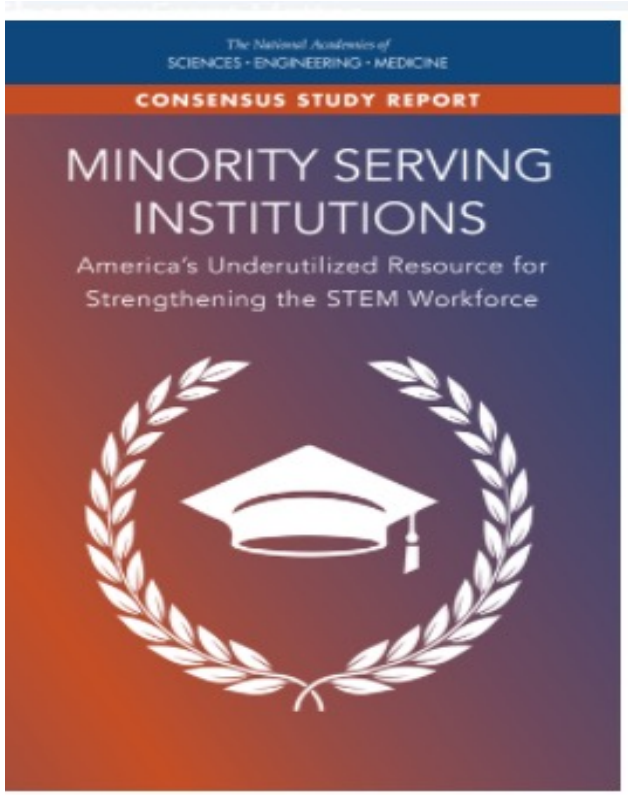
Figure 1. STEM doctoral degrees by country, 2000–18



Source: Data from Josh Trapani and Katherine Hale, *Science and Engineering Indicators 2020: Higher Education in Science and Engineering* (NSB-2019-7) (Alexandria, VA: National Science Board, National Science Foundation, 2019). https://ncses.nsf.gov/pubs/nsb20197/.

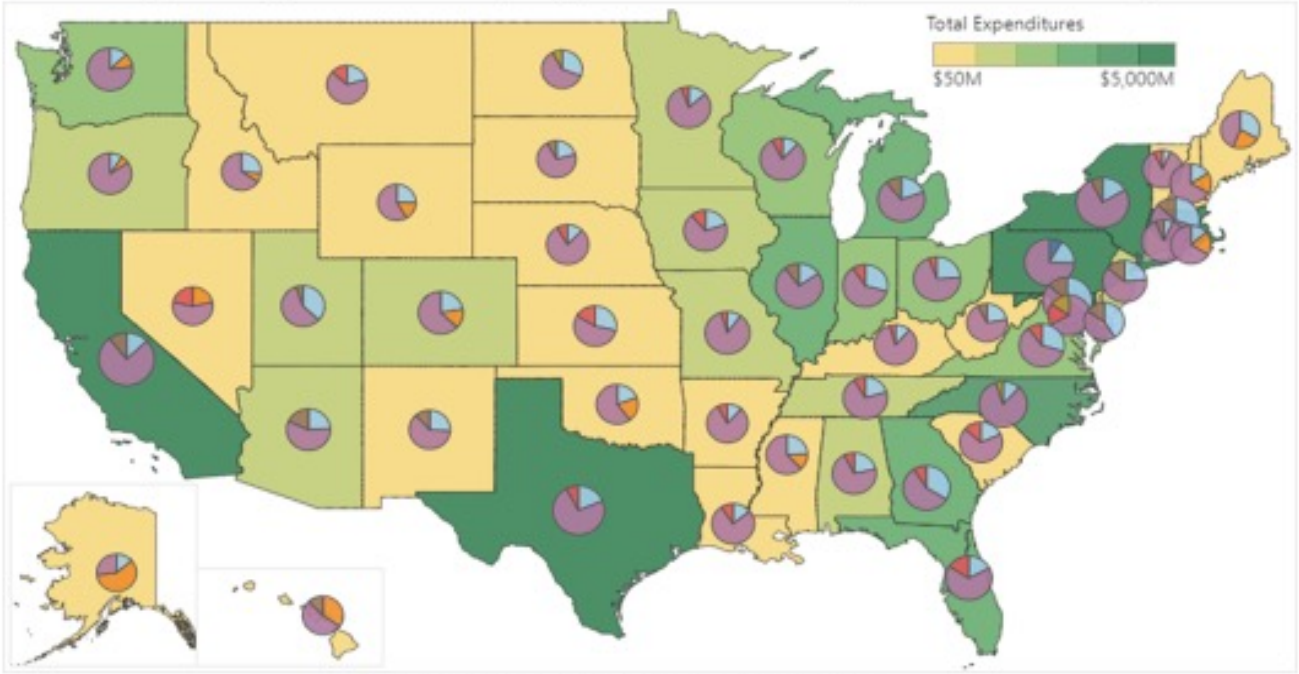
The National Academies of SCIENCES ENGINEERING MEDICINE

Building Research Partnerships between the Department of Defense University Affiliated Research Centers and HBCUs/MIs

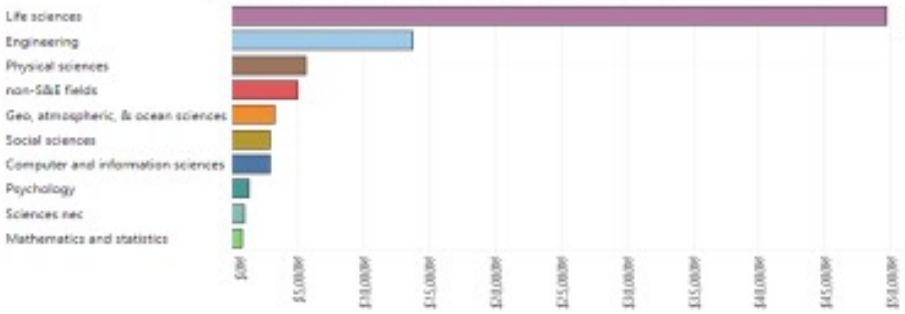


Higher Ed R&D Expenditures by State and Field, 2020

(State shading indicates total HERD spending; Pie charts show shares of top 3 research fields in each state)

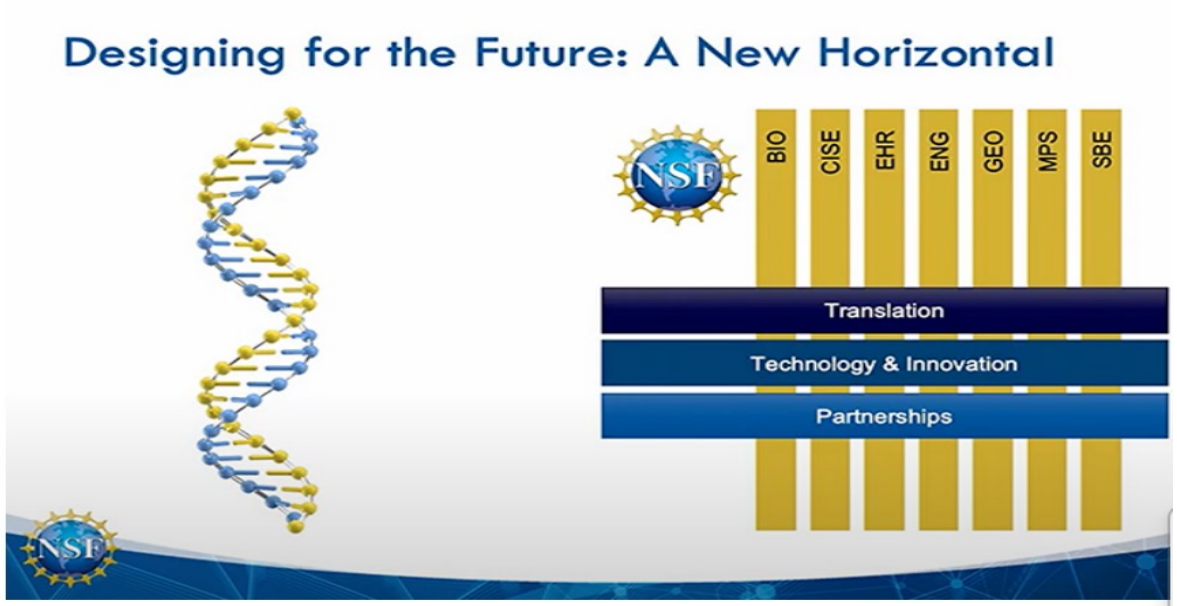


Total US Higher Ed R&D Expenditures by Field, 2020




FREEMIND
Non-Dilutive Funding Experts
ADVANCED RESEARCH PROJECTS AGENCY: HEALTH
What R&D will be funded by "the DARPA for Health"?

NSF: New Technology, Innovation and Partnerships (TIP) Directorate



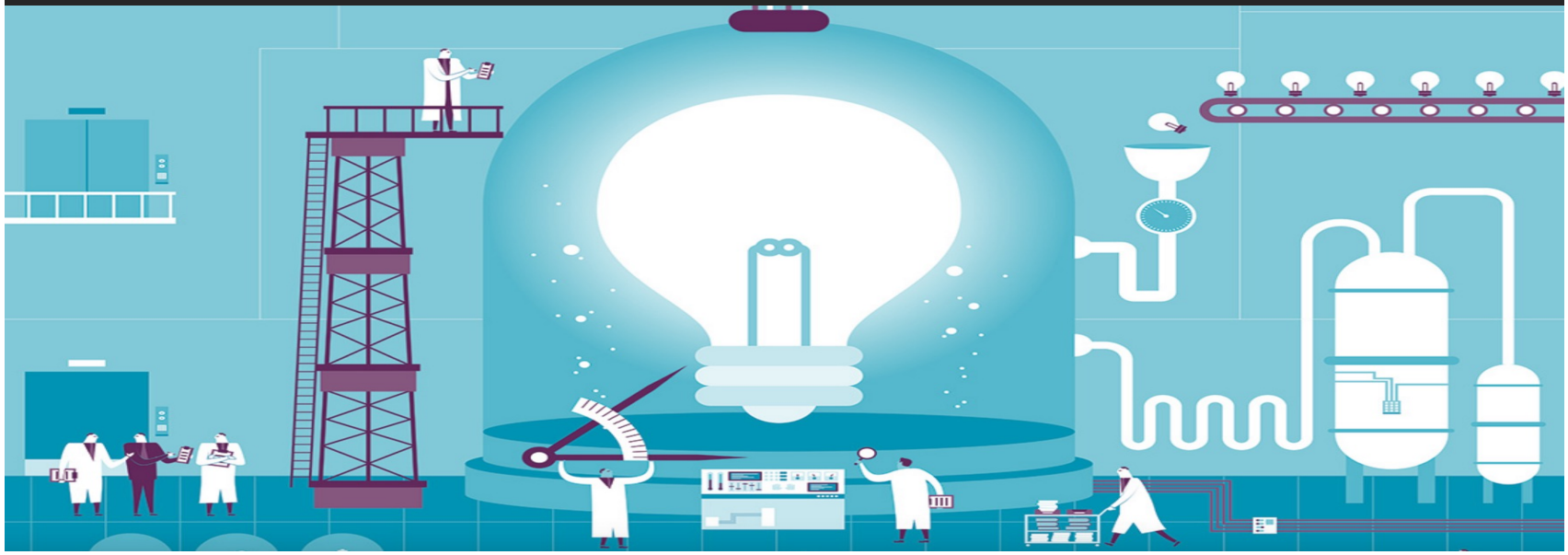
A slide NSF has used to describe the mission of the new directorate, which is envisioned as "horizontal" entity that cuts across the portfolios of NSF's other directorates. The DNA helix represents the interplay between exploratory research and technology commercialization.

SCIENCEINSIDER | SCIENTIFIC COMMUNITY

New NSF program hopes to rev the nation's 'engines' of innovation

Regional centers would get $160 million each to translate research into high-tech jobs and boost local economies

16 MAY 2022 · 5:15 PM · BY JEFFREY MERVIS




Key
ADVANCED MANUFACTURING
AEROSPACE and DEFENSE
AGRICULTURE and NATURAL RESOURCES
BIOTECHNOLOGY and BIOMANUFACTURING
ENERGY and RESILIENCE
HEALTH CARE and DIGITAL HEALTH
INFORMATION TECHNOLOGY
TRANSPORTATION, CONSTRUCTION, and LOGISTICS
WATER and BLUE ECONOMY
Dots mark the lead institution of finalists

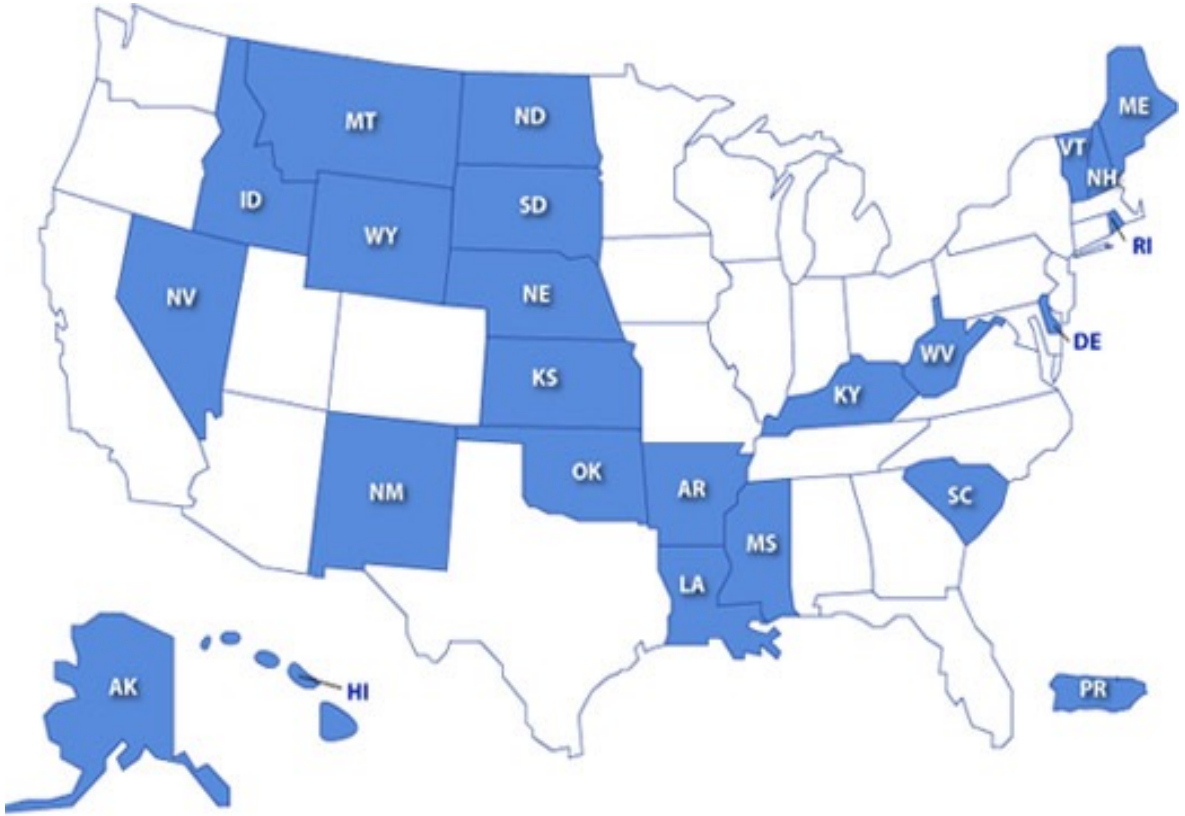
Some other eligible Phase 2 implementation grant costs include construction activities, such as water and sewer system improvements, industrial parks, shipping and logistics facilities, business incubators and accelerators, brownfield redevelopment, technology-based facilities, wet labs, multi-tenant manufacturing facilities, science and research parks, transportation enhancements, and telecommunications infrastructure (e.g., broadband). Eligible non-construction activities can include design and engineering, technical assistance, economic recovery strategy development, market feasibility studies, and the capitalization of revolving loan funds (RLFs).

U.S. Senate and House of Representatives Regional Technology and Innovation Hub Program: Infrastructure for Bio Accelerators

$7 Billion Authorization House

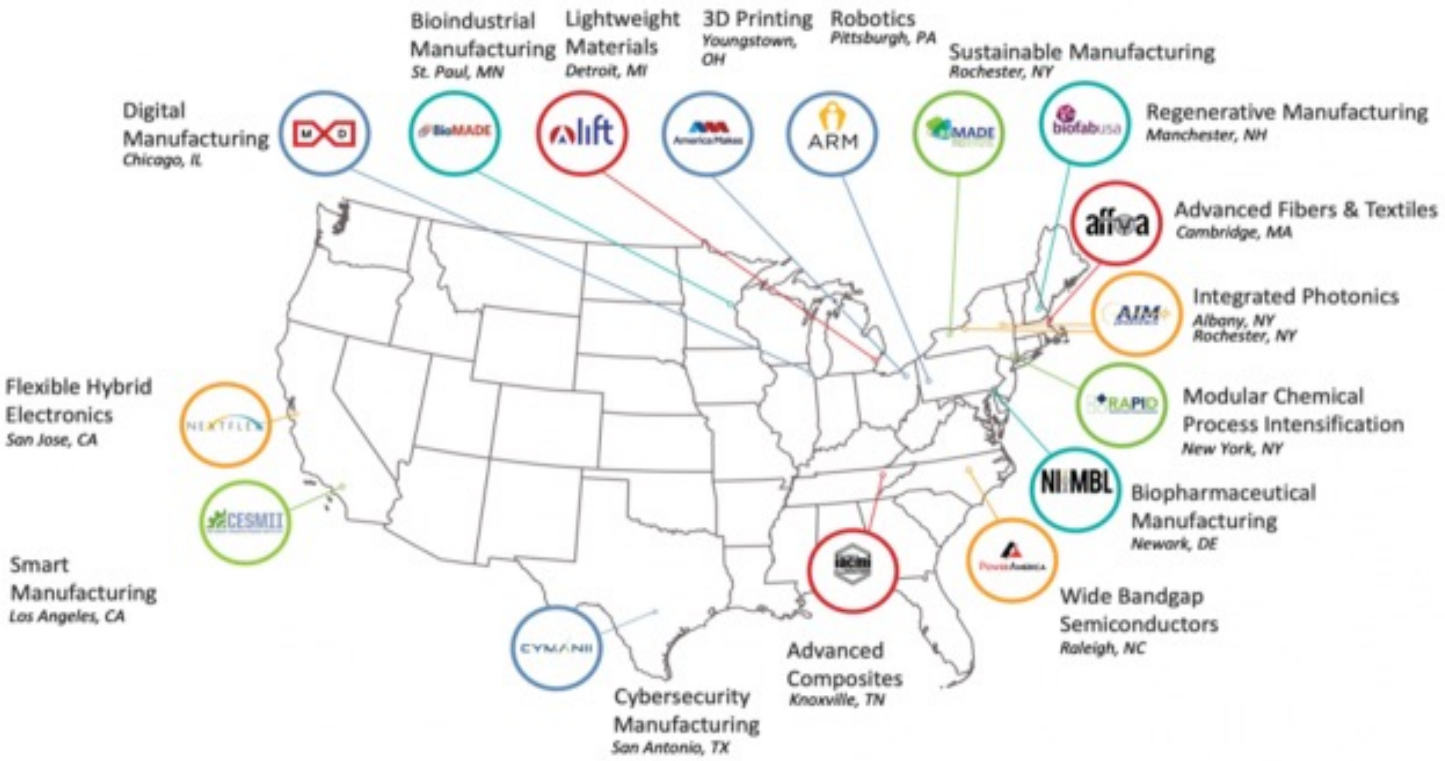
$9.4 Billion Authorization Senate

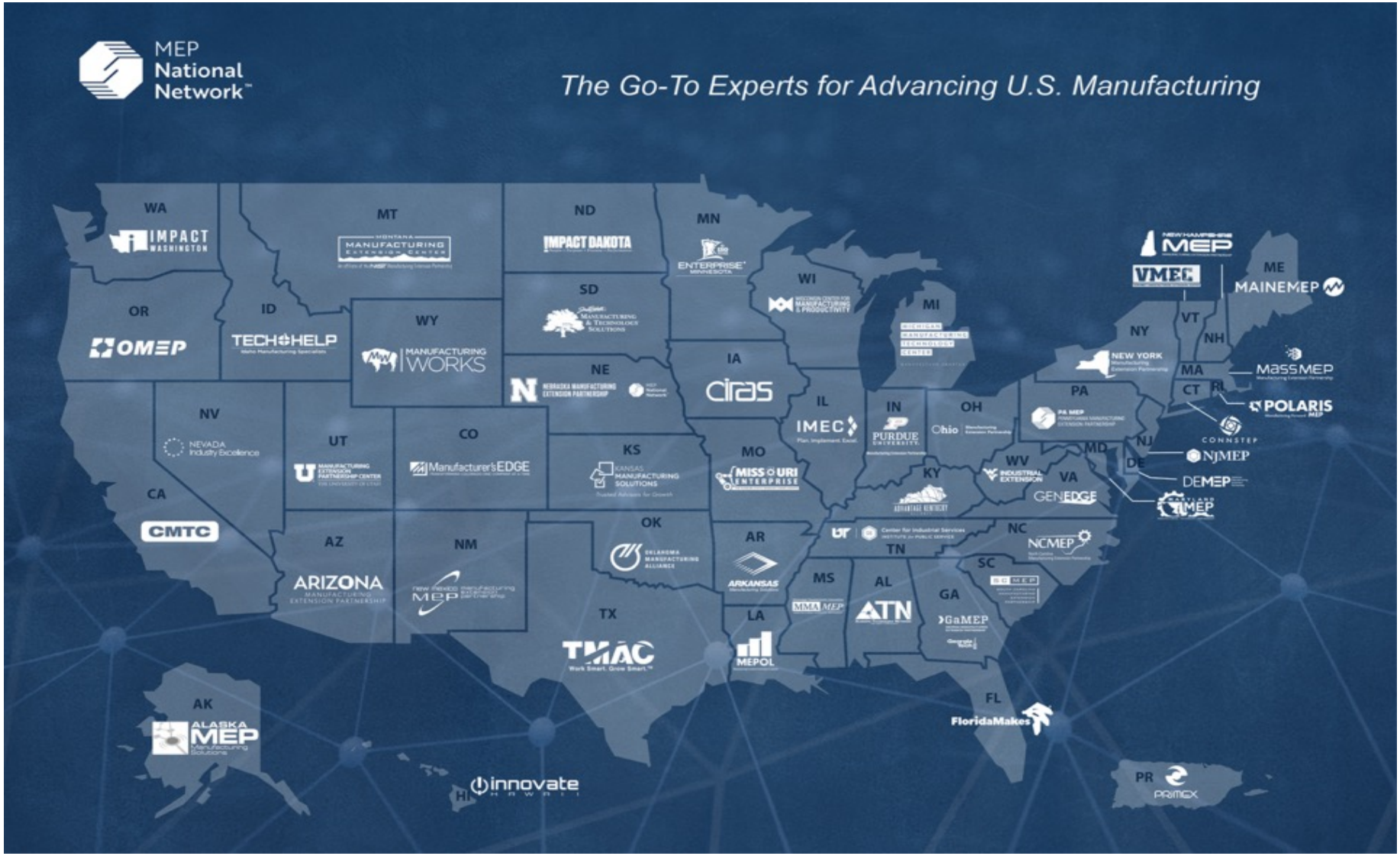
EPSCOR (NSF) and IDeA (NIH) States



	HOUSE: America COMPETES Act	SENATE: USICA
Directorate for Science and Engineering Solutions	This section directs the Director of the NSF to appoint a Directorate for Science Engineering Solutions that advances research and development solutions that address societal and national challenges while accelerating research for technology commercialization (Sec. 10308). Furthermore, this section authorizes the appropriation of $40 million for each FY22 through FY26 to support the Directorate's efforts. The section also requires the Director to identify—and regularly update—five focus areas to guide the Directorate's activities (Sec. 10308). In addition, this section establishes a grant program for planning and capacity building at colleges and universities. Grants awarded for this program would (i) last at least three years and are capped at $500,000 to ensure the availability of staff; (ii) revise institution policies, including policies related to intellectual property (IP) and faculty entrepreneurship; (iii) develop new local and regional partnerships; (iv) develop seminar courses and other educational opportunities for students, post-doctoral researchers, faculty and other relevant staff at institutions of higher education to increase awareness and understanding of entrepreneurship, patenting and technology transfer, among other areas; and (v) create/fund competitions to allow entrepreneurial students and faculty to illustrate the commercialization potential of their ideas.	No comparable provision.

Manufacturing USA Institutes

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SD
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IMEC
IN
PURDUE UNIVERSITY
OH
Ohio Manufacturing Extension Partnership
NV
NEVADA Industry Excellence
UT
MANUFACTURING EXTENSION PARTNERSHIP
CO
Manufacturer's EDGE
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MISSOURI ENTERPRISE
CA
CMTC
AZ
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NM
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MMA MEP
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WV
INDUSTRIAL EXTENSION
PA
PA MEP
NY
NEW YORK Manufacturing Extension Partnership
NEW HAMPSHIRE MEP
VMEC
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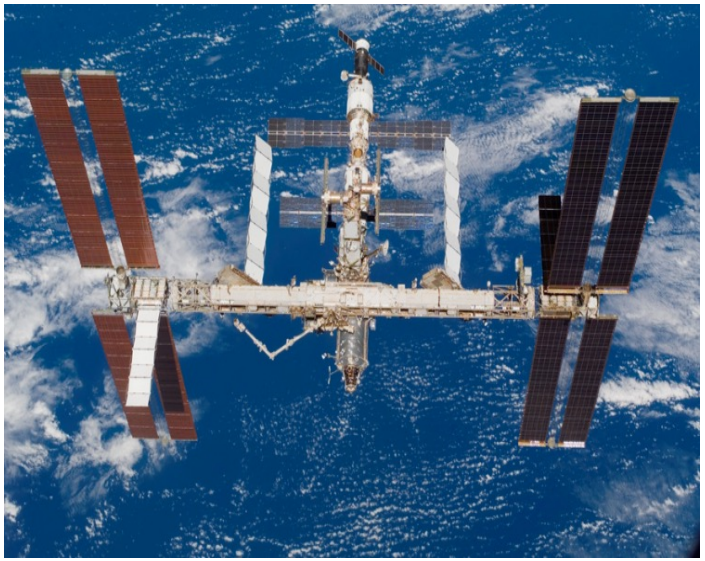
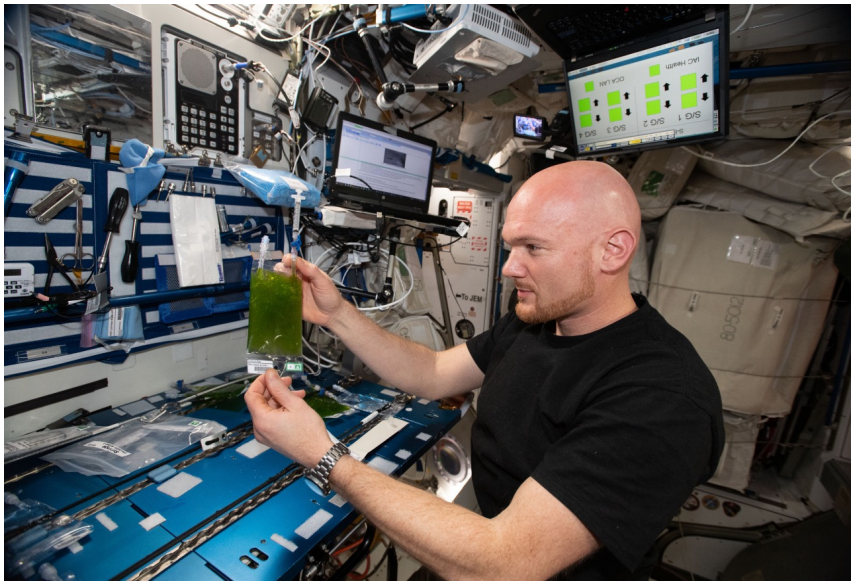
Bio Manufacturing in Space





INNOVATION FILES

Quick takes, quips, and commentary on the latest in tech policy

Launching an Advanced Manufacturing Institute in SPACE

By Brian Darmody | January 20, 2022

Time for a Concerted Effort to Explore Manufacturing in Microgravity Environments

Space is emerging as the next frontier for advanced manufacturing. The market alone for biomanufacturing in space is expected to reach nearly $3 billion by the mid-2030s. Similar microgravity markets exist in other engineering and technology areas.

Accordingly, the administration and Congress need a coordinated effort to take advantage of the incredible opportunity of manufacturing at scale in the microgravity environment. As a recent gathering of corporations, federal agencies, scientists, and engineers examining biomanufacturing in space noted: "The formation of a public-private consortium is needed to further prioritize opportunities, de-risk space-based research and development (R&D) and guide the translation of results into commercial applications on Earth."

Earmarks and Appropriation Committees


Community Project Funding (House):
Congressionally Directed Spending (Senate)
Earmarks: Nearly $10 Billion in FY 2022
https://appropriations.house.gov/transparency
IDEAS
DEADLINE
VECTOR
RESEARCH
MOCKUP
DISCUSSION
ingenuity
SPACE
NEGATIVE
POSITIVE

PRESS RELEASE

New Report Outlines Best Practices in Bioscience Economic Development Initiatives

January 20, 2022

Today, the Biotechnology Innovation Organization (BIO), in partnership with the Council of State Bioscience Associations (CSBA), released a new report on bioscience economic development best practices, "Driving the Bioscience Economy Forward During the COVID-19 Pandemic: Best Practices in State and Regional Economic Development Initiatives."

Now in its sixth edition, the report serves as a leading analysis of legislative and regulatory initiatives at the state and regional level for economic development in the bioscience ecosystem.

UMD College Park Technology Advancement Incubator Building

Local Initiatives to Grow Bio Ecosystem

Council Approves Zoning Changes to Expedite Innovation and Expand Biohealth in Montgomery County

Measures led by Councilmember Friedson will accelerate and streamline the regulatory process to develop and spur expansion in biohealth facilities

For Immediate Release: Tuesday, Feb. 15, 2022

Today the Montgomery County Council unanimously enacted new zoning measures, led by Councilmember Andrew Friedson, which will significantly accelerate and streamline the regulatory process to develop biohealth facilities in Montgomery County. These changes will help attract and retain biohealth companies and reinforce Montgomery County's reputation as a leader in the life sciences.

Zoning Text Amendment 21-09, Office and Professional – Biohealth Priority Campus, streamlines the regulatory process for new biohealth facilities 150,000 square feet or larger and for existing facilities expanding by 50,000 square feet or more. To utilize the new expedited review process, Biohealth Priority Campuses must be located in the commercial, residential and employment office areas of Montgomery County and near Metro and Purple Line stations, in an opportunity zone, or a half mile from a planned or existing Bus Rapid Transit route.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University-Industry
Partnerships


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PRESS RELEASE

The Licensing of Academic Patents Contributed Up to $1.9 Trillion to the US Economy, Supported up to 6.5 Million Jobs in the last 25 Years New Report Highlights the Importance of Research and Public-Private Partnerships

June 14, 2022

Greetings From

THE 8TH ANNUAL BIOHEALTH

★★★ IN-PERSON AND LIVE STREAMING ★★★

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TOGETHER

SEPTEMBER 20TH, 2022

Save the Date

CAPITAL REGION FORUM

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INTERNATIONAL CONFERENCE
SEPTEMBER 19-22 • TORONTO

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On The Road To Toronto

See You Soon!

- Toronto Sept ’22
- Boston June ‘23

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